

U.S. Antarctic Marine Living Resources Program
2008-2009 Weekly Field Reports
Cape Shirreff, Livingston Island

Volume 10
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Seabirds:

1. Gentoo penguins in our reproduction study plots continue to brood chicks, 82% of the nests are brooding and 18% have failed. On 28 December we observed peak chinstrap penguin hatch in our reproduction study plots. In the 5 weeks since chinstrap penguin clutch initiation 56% of the chinstrap penguin reproduction nests have hatched, 31% continue to incubate eggs, and 14% have failed.
2. We continue to monitor known age penguins that were banded here as chicks. Of the 37 known aged gentoo penguins that have nested 54% are brooding chicks and 46% have failed. Forty known aged chinstrap penguins have nested. Of these, 46% have hatched, 21% are incubating eggs, and 33% nests have failed.
3. The brown skuas started to hatch this past week. Of the 21 brown skua pairs that have initiated clutches 2 have hatched, 18 continue to incubate and 1 remains failed. One of the pairs that had failed has since re-nested and is incubating an egg.
4. On 24 Dec we deployed 10 satellite transmitters and 10 Time Depth Recorders (TDRs) on gentoo penguins that are brooding chicks. The satellite transmitters will be used to determine where the penguins forage and the time-depth recorders give profiles of diving behavior. We will recover these instruments after one week of deployment.



Pinnipeds:

5. PTT and GPS instrumented females have all completed one trip to sea. All three PTT females are on shore today and we expect they will depart for their second trip soon. All three had three day trips.
6. All our CCAMLR attendance females ($n=29$) have completed at least one trip to sea. Mean trip duration for the first trip to sea was 2.8 days (s.d.: 1.17; range: 1.1-5.3). Two females have already completed five trips to sea.
7. We continue to census pups, live and dead, every other day. Our maximum count, however, was on 21 December we recorded a total of 1,574 pups (1532 live and 42 dead). The mean of four counts prior to the start of leopard seal predation is 1,566 pups (s.d.: 7.5). We have not recorded any pregnant females for several days now.
8. On 26 Dec we censused the entire Cape for fur seal pups. Three people counted and the total counts for all three were within 3.9%. Our counts indicate no change in Antarctic fur seal pup production for Cape Shirreff.
9. Tag re-sight surveys indicate 82.1% (174/212) of our tagged female population have returned to Cape Shirreff. We recorded no new arrivals since last week. The natality rate for returned females thus far is 83.3%.
10. We continue to see new arrivals of juvenile fur seals. To date we have seen 91 fur seals that were tagged as pups in previous years. Seven new known-aged seals have returned since last week. No yearlings have been seen yet. We observed a juvenile male tagged elsewhere arrive this week. We do not know the origin of the tag but will



try to find out.

11. Elephant seals are returning to molt in increasing numbers. Yesterday we observed our first tag return of an adult female to molt. She was tagged in January 2006 and still has evidence of an instrument attachment from that year.
12. Leopard seals are increasing and we observe new animals tagged in previous years arriving almost daily. Fur seal pups have just begun entering the water and we observed our first leopard seal predation of a fur seal pup on 26 December. We have tagged four leopard seals that were not tagged and we have observed seven others that were tagged in past years at Cape Shirreff.
13. We collected our second week of scats for studies of fur seal diet. We collect ten every week. All scats collected this week were composed primarily of krill.

Weather:

14. Our weather continues to be unseasonably dry and dominated by west winds. Mean wind speed was 16.3 mph with maximum wind gust of 44mph. The mean temperature for the week was 1.8C. The high temperature for the week was 6.1C and the low was -0.8C. Total precipitation this week was 0.05 inches.

Camp:

15. We enjoyed a beautiful, sunny, warm Christmas day at the Cape. Everyone at the Cape sends their thanks to all those family and



friends that sent Christmas presents and cards with the camp opening in October. Their thoughtfulness made Christmas at the Cape that much more special. Best wishes to all for a Happy New Year from the AMLR Cape Shirreff crew.

16. The R/V *Yuzhmorgeologiya* is scheduled to arrive at the Cape on 12 January and we are now counting the days to the arrival of our re-supply and our many friends on board.

Submitted by AMLR staff currently residing at the Cape Shirreff field station, Livingston Island.

